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10/768,976	01/30/2004	Keith V. Wood	341.020US1	6271

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EXAMINER

KOSSON, ROSANNE

ART UNIT

PAPER NUMBER

1653

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/768,976

Applicant(s)

WOOD ET AL.

Examiner

Rosanne Kosson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-27,35-52,55-78 and 87-120 is/are pending in the application.
- 4a) Of the above claim(s) 12-14,16-27,35-52,55-78 and 87-106 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 110-120 is/are allowed.
- 6) ☒ Claim(s) 1-3,6-11,15 and 107 is/are rejected.
- 7) ☒ Claim(s) 5,108 and 109 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/27/06.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

The amendment filed on January 27, 2006 has been received and entered. Claims 1, 35, 40, 47, 55, 56 and 107 have been amended. Claims 4, 28-34, 53, 54 and 79-86 have been canceled. Claims 110-120 have been added. Accordingly, claims 1-3, 5-11, 15 and 107-120 are examined on the merits herewith.

Claims 35, 40, 47, 55, 56 and 78 contain an error. Although claims 35, 40, 47, 55 and 56 have been amended, they were withdrawn from prosecution in the previous Office action as being drawn to non-elected inventions. Applicants have indicated the status of these claims to be currently amended. The correct status is withdrawn-currently amended. Claim 78 was also withdrawn from prosecution in the previous Office action as being drawn to non-elected inventions. Applicants have indicated the status of this claims to be previously presented. Appropriate correction is required.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Allowable Subject Matter***

Claims 110-120 are allowable.

As previously discussed, to the extent that claim 9 reads on biotin as the R group (functional group), claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the

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limitations of the base claim and any intervening claims. Additionally, to be allowable, R would also have to be amended to biotin, the species elected in claim 10.

Claims 5, 108 and 109 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Claim Objections***

Claim 119 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 9. The identical molecule is claimed, and it is not substantially changed by its method of making. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Claim Rejections - 35 USC § 112, first paragraph***

Upon reconsideration, including consideration of Applicants' broad interpretation of the term functional groups, the written description and enablement rejections are withdrawn.

### ***Claim Rejections - 35 USC § 112, second paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 5-11, 15 and 107-120 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, firstly, claims 1, 107 and 120 recite that the linker comprises from about 2 to about 30 carbon atoms. About 2 and about 30 are not defined in the specification. An atom is a discrete unit, particularly when represented diagrammatically in a chemical structure. Thus, it cannot be determined what Applicants' mean by about 2 and about 30, and the word about renders the claims indefinite. Applicants are required to recite the range that they mean to claim. Secondly, if R and X must be separated by at least 11 atoms, and if A has at least 4 carbons, then the linker must have at least 7 carbon atoms in its chain. If the 4 carbons of A are not in a chain, i.e., if they are in a ring, then the linker must have at least 8 atoms in its chain. Consequently, the linker must comprise from 7 to 30 carbon atoms. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

In view of Applicants' amendments to the claims, the rejections under 35 USC § 102 in the previous Office action are withdrawn.

Claims 1-3 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Bennetau et al. (WO 01/53303, see corresponding U.S. Application No. 2003/0166957). Bennetau et al. disclose a compound comprising a functional group (a carbon-carbon double bond) and a halide (chloride). The functional group and halide are separated by

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at least 12 atoms, the linker comprises between about 2 and about 30 atoms in an unbranched chain, and the molecule, between the linker and the halide, comprises at least four CH<sub>2</sub> groups (see Fig. 2, compound 6). Substrates for a *Rhodococcus* dehalogenase are alkyl halides. Therefore, a holding of anticipation is required.

Claims 1-3, 6-8, 11, 15 and 107 are rejected under 35 U.S.C. 102(b) as being anticipated by Morita et al. (US 4,818,807). Morita et al. disclose compounds (ferroelectric liquid crystal polymers) comprising a functional group (phenyl groups, aromatic rings) and a halide (bromide). The functional group and halide are separated by at least 12 atoms, the linker comprises between about 2 and about 30 atoms in an unbranched chain, and the molecule, between the linker and the halide, comprises at least four CH<sub>2</sub> groups. The linker also comprises an oxo group and an oxygen heteroatom (see col. 3, lines 48-49, and col. 7, lines 29-68). Phenyl groups are chromophores, and the compounds that contain them are, therefore, optically detectable. Substrates for a *Rhodococcus* dehalogenase are alkyl halides. The compound is made by reacting a molecule of the formula Z-linker-A-X, in which Z is Br and linker-A is a 10- to 12-carbon alkyl chain with the alcohol form of the benzene-ring-containing compounds (Y = H) (see col. 3, lines 48-49, col. 7, lines 29-68 and Examples 1, 4 and 5 in cols. 11-15). Therefore, a holding of anticipation is required.

Claims 1-3, 6-8 and 107 are rejected under 35 U.S.C. 102(b) as being anticipated by Lustoň et al. (CS 259396, see also enclosed English translation). Lustoň

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et al. disclose a compound (an inhibitor of photodegradation for polymers) comprising a functional group (a piperidine ring) and a halide (bromide). The functional group and halide are separated by at least 12 atoms, the linker comprises between about 2 and about 30 atoms in an unbranched chain, and the molecule, between the linker and the halide, comprises at least four CH<sub>2</sub> groups. The linker also comprises an oxygen heteroatom (see Abstract, Formula I). Substrates for a *Rhodococcus* dehalogenase are alkyl halides. The compound is made by reacting a molecule of the formula Z-linker-A-X, in which Z is Br and linker-A is a 12-carbon alkyl chain with the alcohol form of the piperidine compound (Y = H) (see pp. 2, 4 and 10 of the English translation). Therefore, a holding of anticipation is required.

Claims 1, 2, 6-8, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Morzycki et al. ("Synthesis of dimeric steroids as components of lipid membranes," Tetrahedron 53(30):10579-10590, 1997). Morzycki et al. disclose a compound comprising a functional group (a steroid) and a halide (iodide). The functional group and halide are separated by at least 11 atoms, the linker comprises between about 2 and about 30 atoms in an unbranched chain, and the molecule, between the linker and the halide, comprises at least four CH<sub>2</sub> groups (see p. 10582, compound 11). The functional group, a steroid, is a lipid and a drug. Because steroids contain chiral centers, they are optically detectable molecules, as, for each steroid, a pair of isomers that differ at only one chiral center- enantiomers- produces opposite rotations of a plane of polarized light for the R and S isomers. Substrates for a

*Rhodococcus* dehalogenase are alkyl halides. Therefore, a holding of anticipation is required.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosanne Kosson whose telephone number is 571-272-2923. The examiner can normally be reached on Monday-Friday, 8:30-6:00, with alternate Mondays o.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber, can be reached on 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.




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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rosanne Kosson  
Examiner, Art Unit 1653

rk/2006-02-13



**ROBERT A. WAX**  
**PRIMARY EXAMINER**